New York State Department of Transportation
Yellow Flag NB2358W014

By: Alex Abreu
Flag Date: May 31, 2023

Superseding Information:
This flag supersedes: YF NB22CTW011

Structure Information

BIN: **1065318**
Feature Carried: 278I278IX2M23027
Feature Crossed: 6TH AVENUE
Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY
County: KINGS
Political Unit: City of NEW YORK
Approximate Year Built: 1962

Posted Load Matches Inventory : Yes
Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 322

Verbal Notification Information

Person Notified: Muhammad Mubeen
Date: June 02, 2023 9:50:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Alex Abreu, P.E. 099761-1
Date: June 07, 2023

Reviewed By: Robert Kemp
Date: June 07, 2023

Attachments: 10

Flagged Elements

Parent Element	Element	Total Quantity	Unit
	Span Number : 242		
	107 - Steel Open Girder/Beam	989	ft
	PR831 - Steel Beam End	42	each

Flagged Condition Description

This Yellow Flag No. NB2358W014 is superseding Yellow Flag No. NB22CTW011

Location: Span 242, Girder G1 at Pier 242

Description:
The left connection angle at Girder G1 connection to the pier cap at Pier 242 exhibits a 2-1/8”H x 1/2”W (no changes since previous inspection) vertical corrosion crack at the lower fillet section (Photo 5) and 5”H x 1/8”-1/4”W (previously 2-3/4”H x 1”W) corrosion crack at the upper fillet section (Photo 4). The remaining 6-1/8” area of the fillet section between the corrosion cracks at the top and bottom of the angle exhibits up to 50% section loss (Photo 6).

The right stiffener connection angle exhibits a 2”H x ½”W (no changes since previous inspection) vertical corrosion crack at the lower fillet section (Photo 8), 1”H x 4”L corrosion hole (no changes since previous inspection) in the top of the stiffener connection angle adjacent to the fillet section (Photo 7), and 2-1/4”H x 2”L corrosion hole (no changes since the previous inspection) at the base of the stiffener connection angle (Photo 10). The remaining 12” area of the fillet section between the corrosion hole and crack at the top and bottom of the angle exhibits up to 50% section loss (Photo 9). The base of the stiffener connection angle above the pier bottom flange exhibits up to 40% section loss for 3” high surrounding the corrosion hole (Photo 10).
(refer to Yellow Flag Condition Sketch Photo #2 for more details)

There have been minor changes since the previous inspection.

Notes:
1. The location of the defects within the flag description of the previous Yellow Flag No. NB22CTW011 was incorrectly labeled for the corresponding connection angles. For example, the defects mentioned at the right connection angle actually exist at the left connection angle and the defects mentioned at the left connection angle actually exist at the right connection angle within the previous flag description. The defect locations have been updated correctly for the current Yellow Flag NB2358W014 flag description.

2. The affected member, Girder G1 is a load path redundant steel girder consisting of a web depth of 19.5” inches and thickness of 0.606 inches and is located under the deck in the roadway, approximately 12” off the edge of curb line/safety walk. All dimensions were measured in the field. Steel reinforcement plates were previously installed at the girder web which are in generally good condition with moderate corrosion.

3. The adjacent Girder G2, is 5’-5” on center, has repair plates and is in good condition.

4. The adjacent Stringer S1, approximately 24” on center, acts as a support for the railing and curb area above and exhibits 15%-20% section loss in the lower web and full web height along the connection angle with up to 40% section loss at the bottom flange. The right side bottom flange exhibits several areas of 100% section loss at the edge of the flange for up to 1-1/2” wide over 5LF area. The left side bottom flange exhibits 2” diameter corrosion hole at the edge of the flange.

5. Dye Penetrant testing was used to determine the limits of the cracks.

6. A double left lane closure on 3rd Avenue Westbound travel direction with 35’ bucket truck is required to access the flagged location.

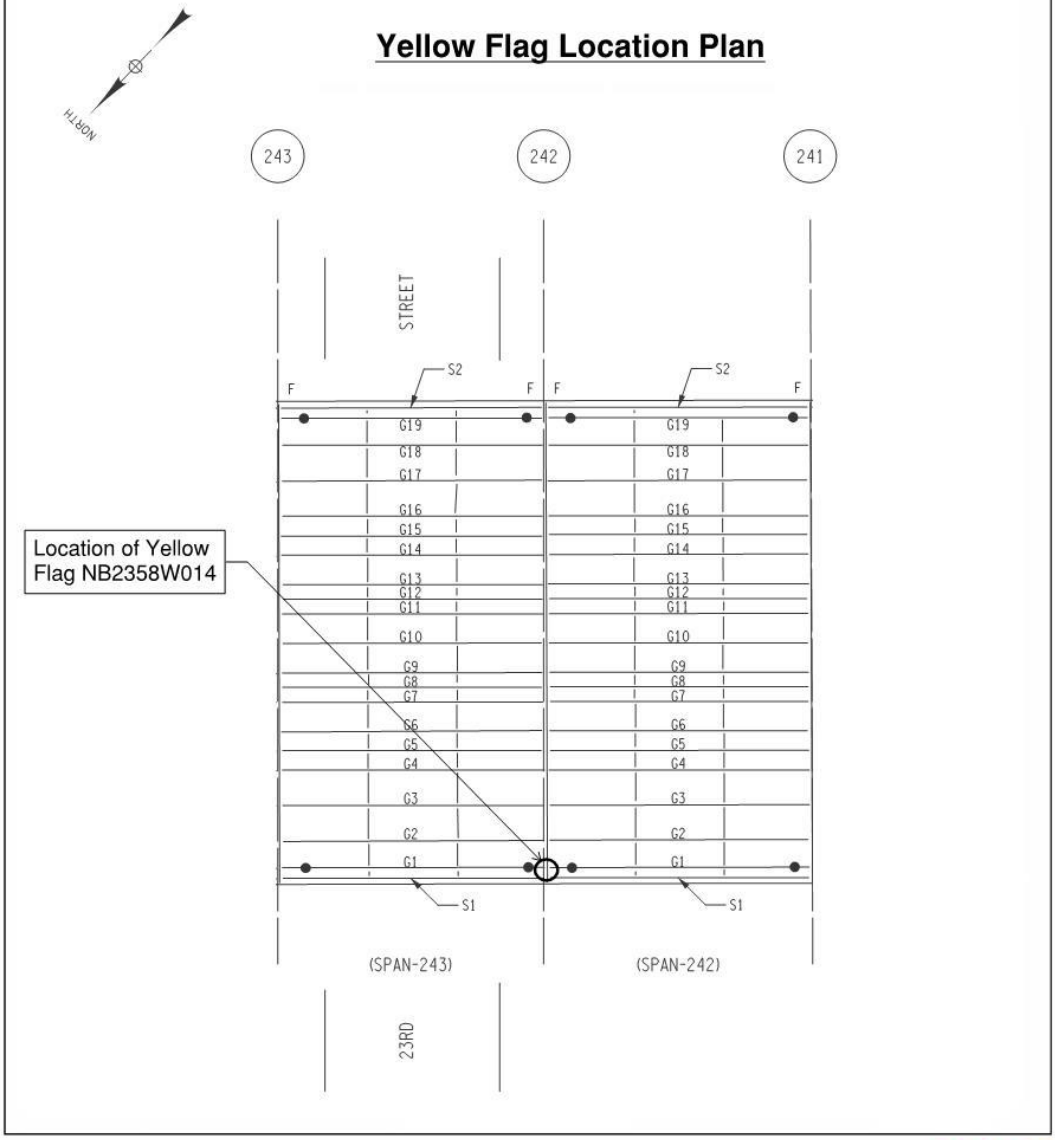
Flag Photographs

Photo Number: **1** Photo Filename: **23_Flag Location Plan.jpg**

Gowanus Expressway
2023 Biennial Inspection - Field Sketch

BIN: 1065318 Team: AA/TS Date: 05/31/2023

Span: 242 Location: Girder G1 at Pier 242



Attachment Description: **Flag Location Plan**

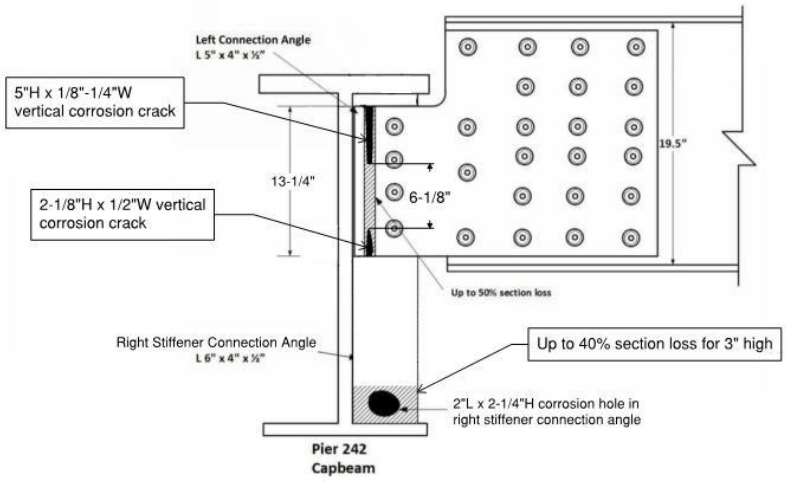
Photo Number: **2** Photo Filename: **23_Span 242_Pier 242_Girder G1_Connection Detail.**

Gowanus Expressway
2023 Biennial Inspection - Field Sketch

BIN: 1065318 Team: AA/TS Date: 05/30/2023

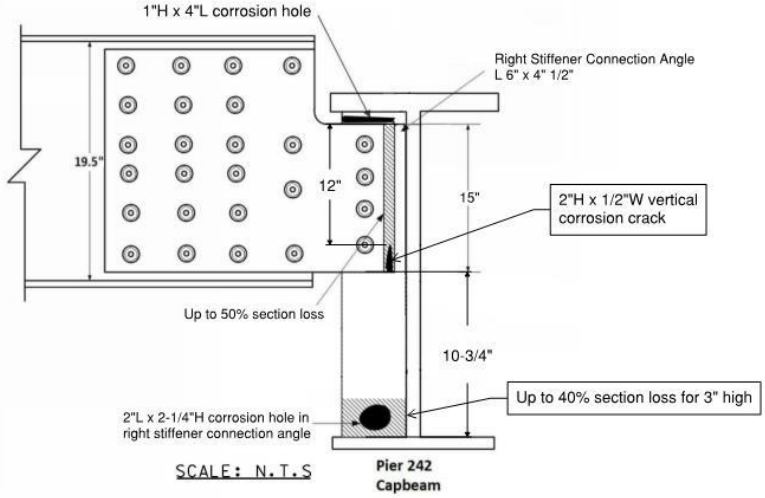
Span: 242 Location: Girder G1 at Pier 242

Left Face of Girder G1



SCALE: N.T.S

Right Face of Girder G1

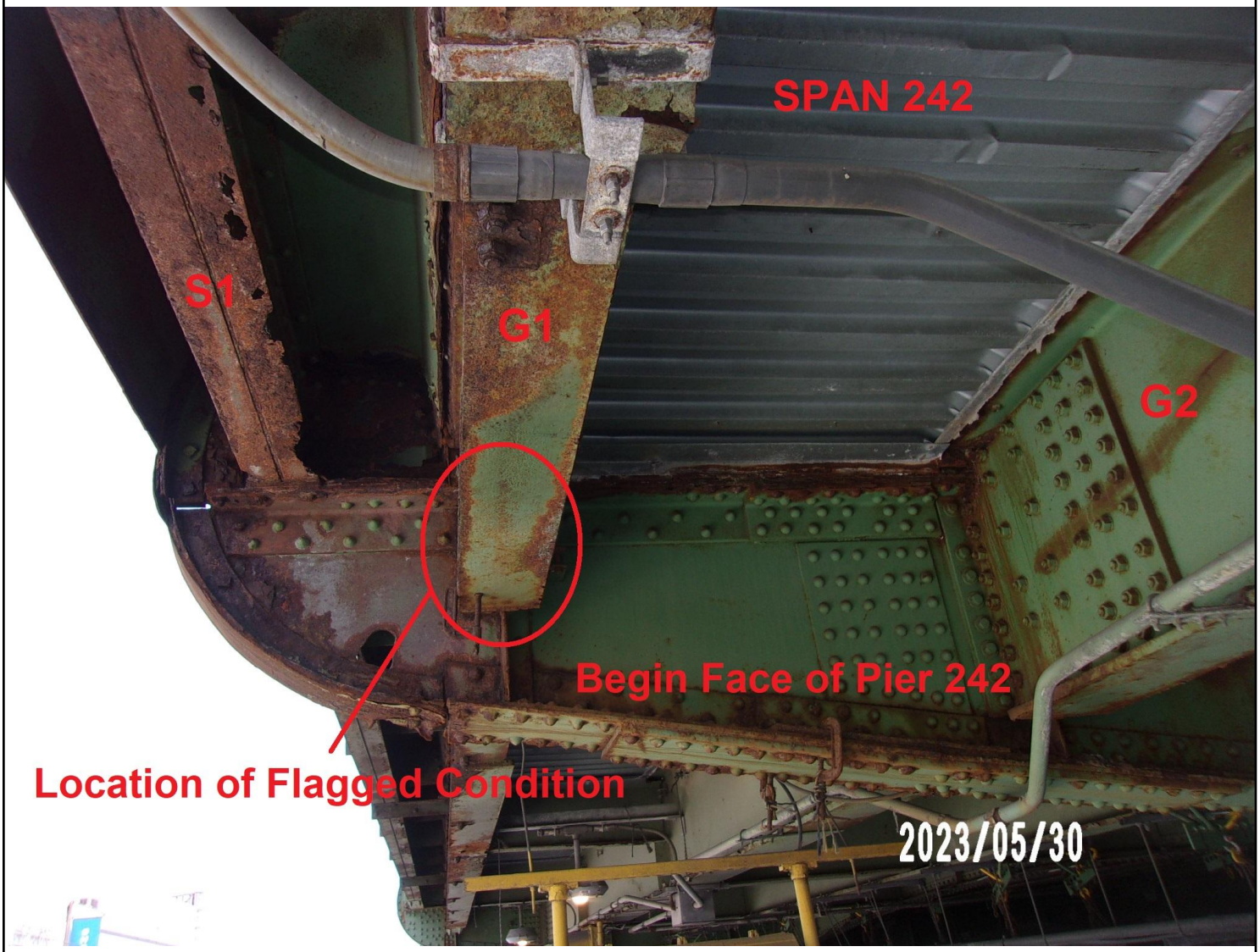


SCALE: N.T.S

Notes:
-As-measured web thickness is approximately 0.606"

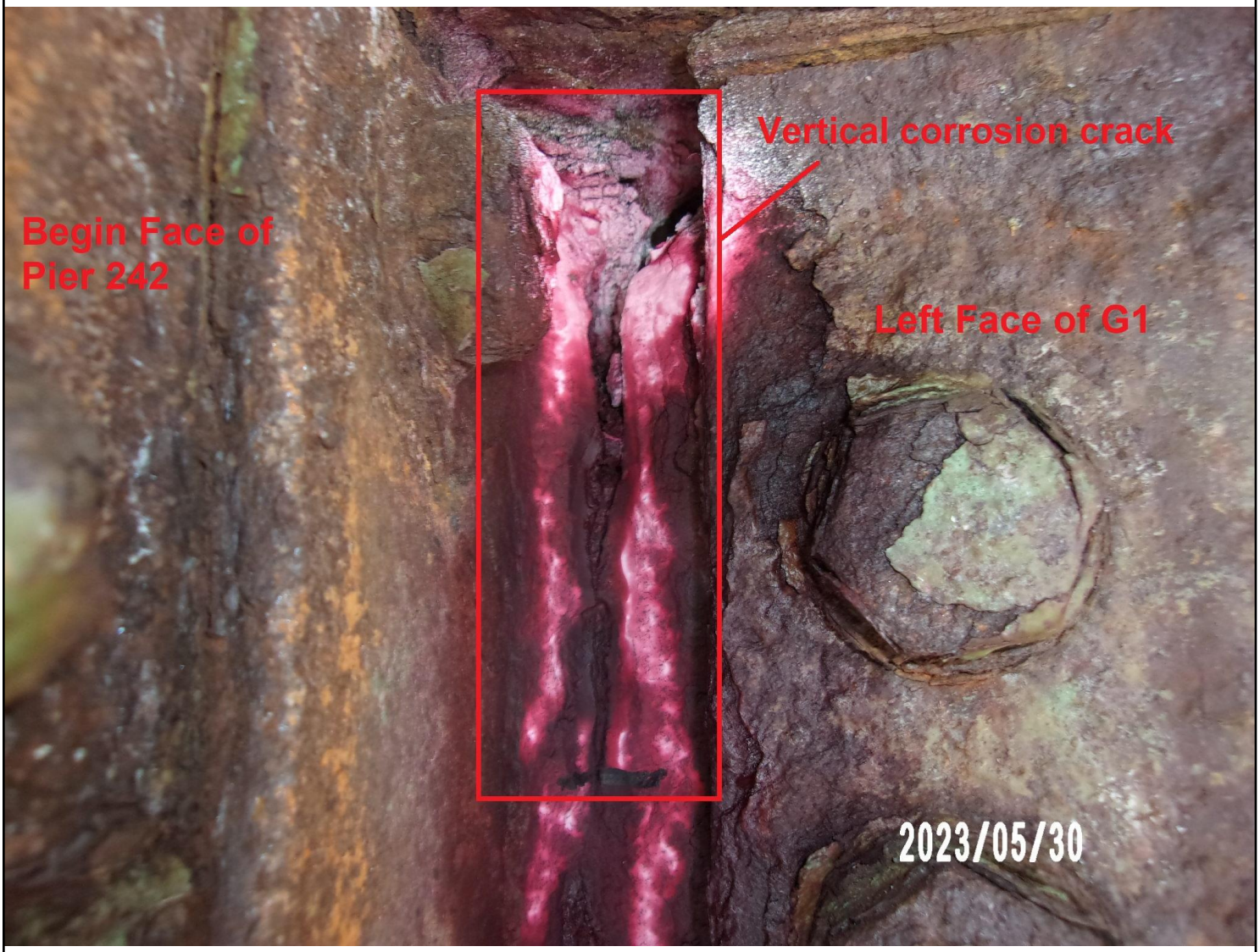
Attachment Description: **Flag Condition Sketch**

Photo Number: **3** Photo Filename: **23_113_7297.JPG**



Attachment Description: **General view of the flagged condition at Girder G1 in Span 242 at Pier 242. Looking End.**

Photo Number: **4** Photo Filename: **23_113_7293.JPG**

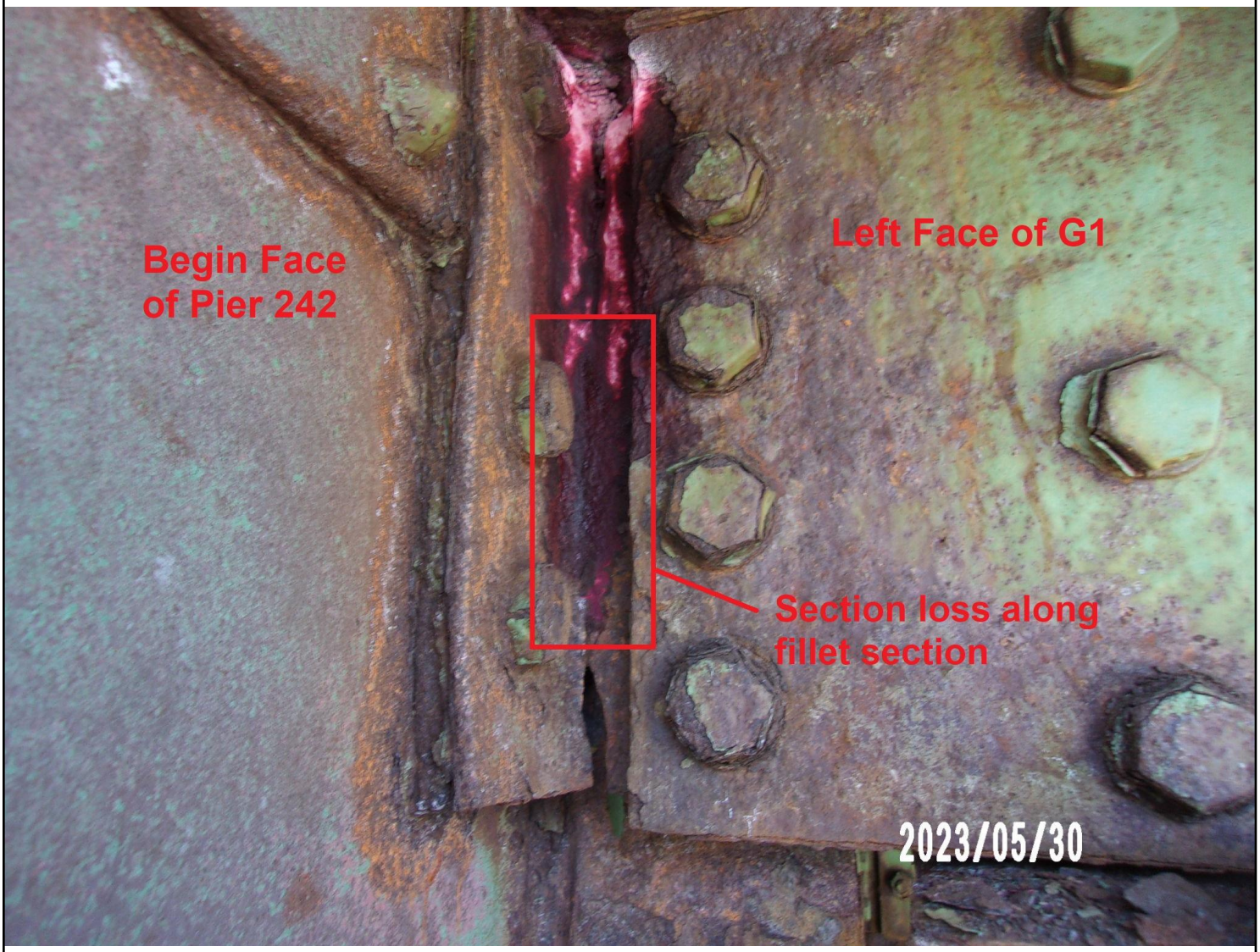


Attachment Description: **The left face of Girder G1 in Span 242 at Pier 242. The top of the left connection angle exhibits 5”H x 1/8”-1/4”W corrosion crack at the fillet section. Looking Right.**

Photo Number: **5** Photo Filename: **23_113_7283.JPG**

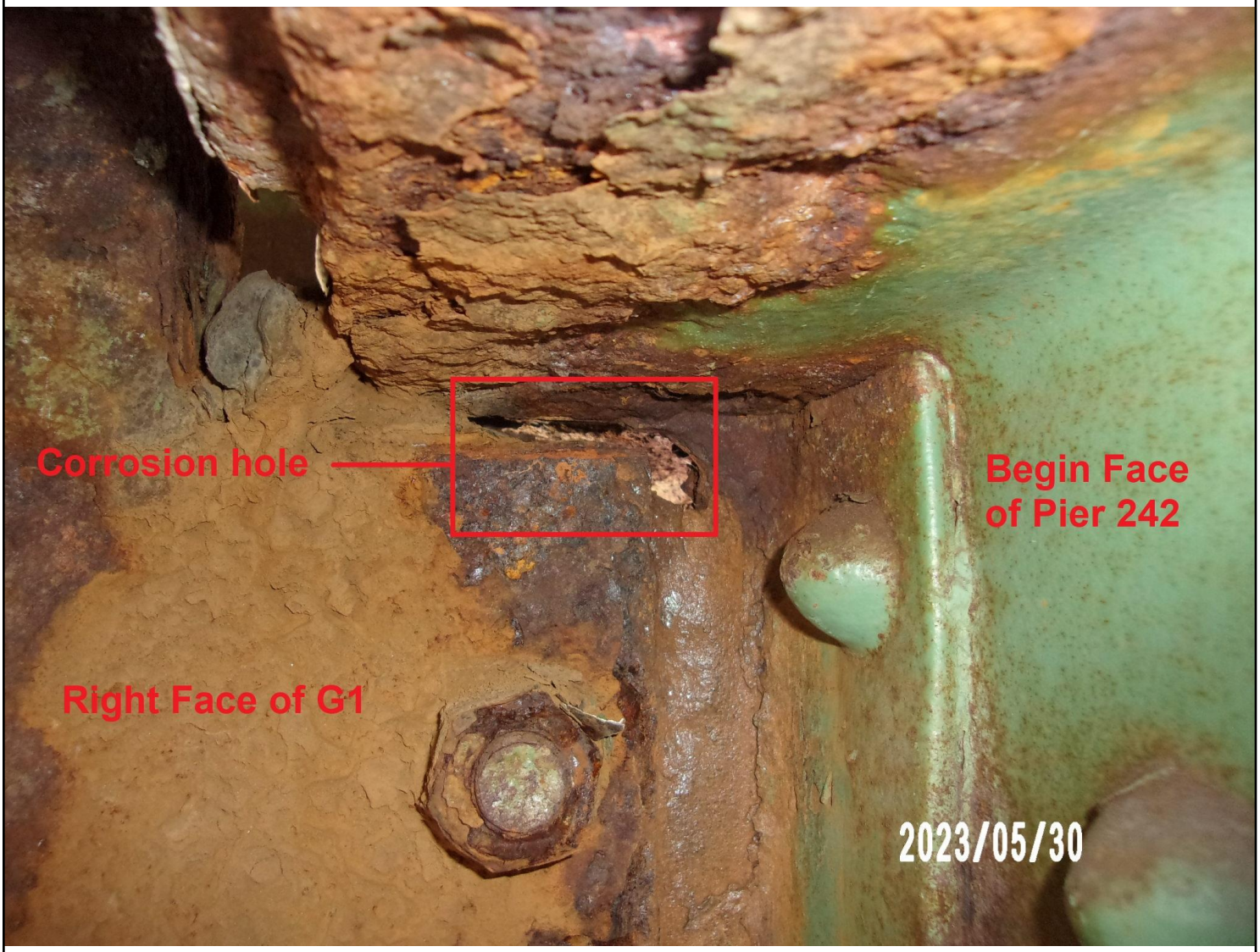
Attachment Description: **The left face of Girder G1 in Span 242 at Pier 242. The bottom of the left connection angle exhibits 2-1/8”H x 1/2”W corrosion crack at the fillet section. Looking Right.**

Photo Number: **6** Photo Filename: **23_113_7295.JPG**



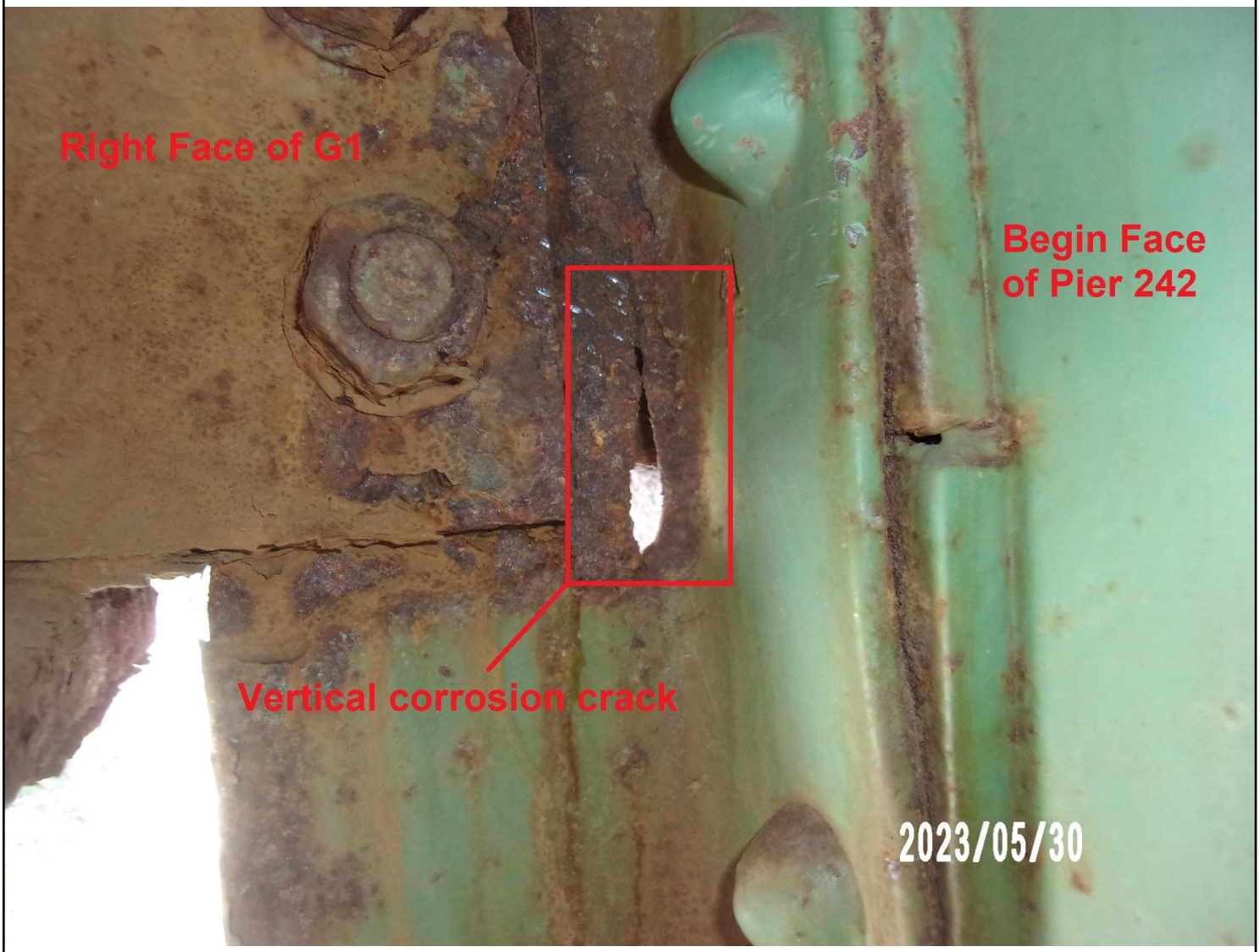
Attachment Description: **The left face of Girder G1 in Span 242 at Pier 242. The left connection angle exhibits up to 50% section loss in the fillet section between cracks at the top and bottom of angle. Looking Right.**

Photo Number: **7** Photo Filename: **23_113_7286.JPG**



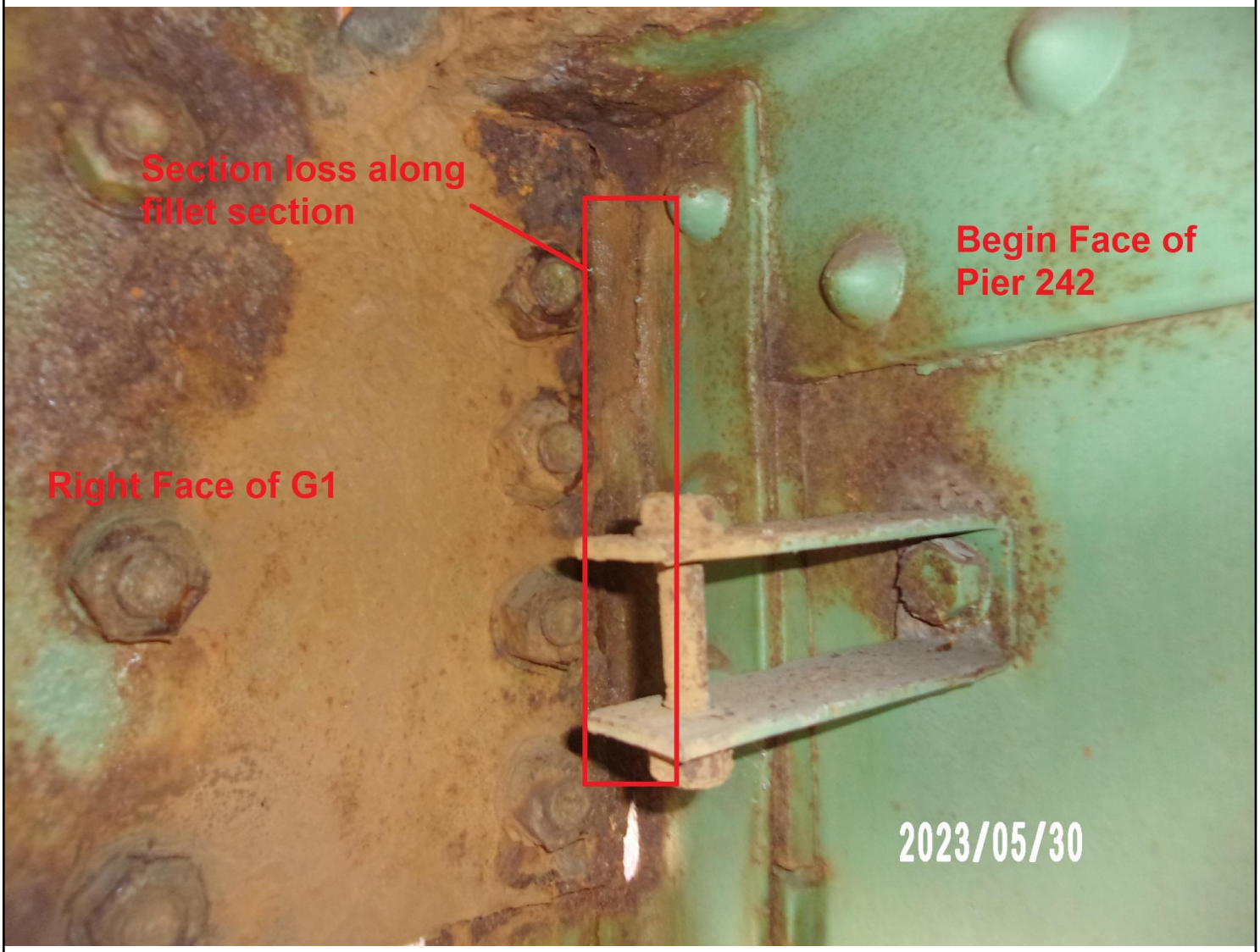
Attachment Description: **The right face of Girder G1 in Span 242 at Pier 242. The top of the right stiffener connection angle exhibits 1"H x 4"L corrosion hole. Looking Left.**

Photo Number: **8** Photo Filename: **23_113_7287.JPG**



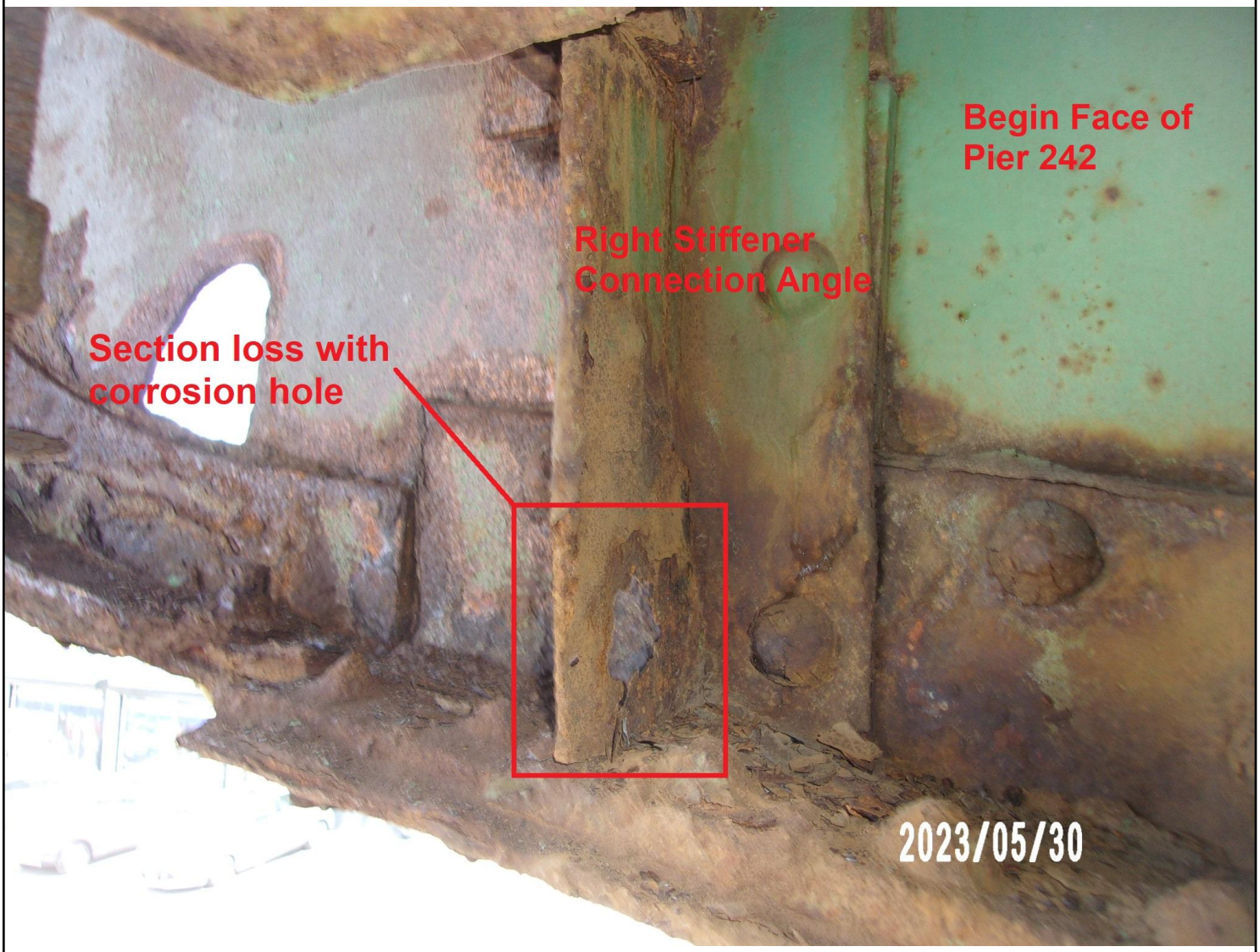
Attachment Description: **The right face of Girder G1 in Span 242 at Pier 242. The bottom of the right stiffener connection angle exhibits 2”H x 1/2”W corrosion crack at the fillet section. Looking Left.**

Photo Number: **9** Photo Filename: **23_113_7289.JPG**



Attachment Description: **The right face of Girder G1 in Span 242 at Pier 242. The right stiffener connection angle exhibits up to 50% section loss in the fillet section between hole at the top and crack at the bottom. Looking Left.**

Photo Number: **10** Photo Filename: **23_113_7290.JPG**



Attachment Description: **The base of the right stiffener connection angle at Girder G1 in Span 242 at Pier 242. The base of the stiffener connection angle exhibits 2-1/4"H x 2"L corrosion hole with up to 40% section loss. Looking End and Left.**